

**CLAIMS**

1. A sense amplifier for nonvolatile memory cells comprising: a reference cell, a first load, connected to said reference cell, and a second load, connectable to a nonvolatile memory cell, said first load and said second load each having a controllable resistance a control circuit controlling said first load and said second load and feeding said first load and said second load with a control voltage independent of an operating voltage between a first conduction terminal and a second conduction terminal of said first load.  
5
- 10 2. The sense amplifier according to claim 1, wherein said control circuit comprises a feedback amplifier, connected to said first load, for controlling a voltage on said first conduction terminal.
- 15 3. The sense amplifier according to claim 2, wherein said feedback amplifier has a first input connected to said first conduction terminal of said first load, a second input connected to a voltage generator and supplying a constant reference voltage, and an output, connected to a control terminal of said first load.
- 20 4. The sense amplifier according to claim 1, wherein said first conduction terminal and said second conduction terminal of said first load are connected to said reference cell and, respectively, to a supply line, providing a supply voltage.
- 25 5. The sense amplifier according to claim 4, wherein said second load has a first conduction terminal, connectable to said memory cell, and a second conduction terminal, connected to said supply line.
- 30 6. The sense amplifier according to claim 5, wherein said first load and said second load comprise respective PMOS transistors and in that said respective first conduction terminals are drain terminals and said respective second conduction terminals are source terminals.

7. The sense amplifier according to claim 3, wherein said output of said feedback amplifier is connected to a control terminal of said second load.

8. The sense amplifier according to claim 1, comprising a first voltage  
5 limiter connected between said first load and said reference cell, for maintaining a drain terminal of said reference cell at a pre-determined voltage, and a second voltage limiter connectable between said second load and said memory cell for maintaining a drain terminal of said reference cell at said pre- determined voltage.

10 9. The sense amplifier according to claim 1, wherein said first conduction terminal of said first load is directly connected to said reference cell, and said first conduction terminal of said second load is directly connectable to said memory cell.

10. The sense amplifier according to claim 9, comprising a voltage-regulator  
15 circuit associated to said first load for maintaining said first conduction terminal of said second load at a pre-set voltage.

11. The sense amplifier according to claim 1, comprising a comparator circuit  
having a first input and a second input connected to said first load and to said second  
20 load, respectively, and an output, supplying a signal correlated to a datum stored in said memory cell.

12. A nonvolatile memory comprising a plurality of memory cells and a  
read/write circuit, selectively connectable to said memory cells; wherein said read/write  
25 circuit comprises a plurality of sense amplifiers, according to claim 1.